

REMARKS

Applicants request favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

Claims 48-62 are presented for consideration. Claim 48 is the sole independent claim. Claim 61 has been amended to clarify feature of the subject invention, while claim 62 has been added to recite additional features of the subject invention. Support for this change and this claim can be found in the original application, as filed. Therefore, no new matter has been added.

Applicants request favorable reconsideration and withdrawal of the rejection set forth in the Office Action dated November 10, 2003.

Claims 48-61 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,319,322 to Ueda et al. Applicants submit that this patent does not teach many features of the present invention, as recited in independent claim 48. Therefore, this rejection is respectfully traversed.

Independent claim 48 recites an exposure apparatus for exposing a wafer to a pattern. The apparatus includes a chamber in which an atmosphere is conditioned to be different from an atmosphere in another apparatus outside of the exposure apparatus and the wafer is exposed to the pattern, and a port section through which the wafer is transferred between the chamber and the other apparatus. The port section has a load-lock mechanism including a vacuum mechanism for creating a vacuum inside of the port section and a supply mechanism for supplying an inert gas to the inside of the port section.

By such an arrangement, in the present invention, the port section can shield an atmosphere in the chamber of the exposure apparatus from an atmosphere in the apparatus in loading/unloading a wafer between the chamber and the other apparatus. Thus, the present invention can prevent degradation of the atmosphere in the chamber of the exposure apparatus during loading/unloading of the wafer between the chamber and the other apparatus. Applicants submit that the cited art does not teach or suggest such features of the present invention as recited in independent claim 48.

The Ueda et al. patent discloses an interface section 12 for sending and receiving a wafer W2 from an aligner 200, which is disposed adjacent to a coating and developing system 100. Column 9, line 44, to column 10, line 35, of this patent discusses that the interface section 12 has a supply mechanism for supplying a clean gas into the inside of the interface section. Applicants submit, however, that the Ueda et al. patent does not teach or suggest at least the features of the port section of the present invention recited in independent claim 48, which includes a vacuum mechanism for creating a vacuum inside of the port section and a supply mechanism for supplying an inert gas into the inside of the port section. Applicants submit, therefore, that the device in the Ueda et al. patent cannot prevent degradation of the internal atmosphere of the aligner 200 in loading/unloading the wafer into/from the aligner 200. Accordingly, Applicants submit that the Ueda et al. patent does not teach or suggest many features of the present invention, as recited in independent claim 48.

The Examiner takes the position that the Ueda et al. patent discloses that “the interface section can be naturally exhausted to be under normal pressure in order to prevent contaminated air from entering the exposure chamber (e.g., column 9, lines 55-63, column 11, lines 6-14).

Alternatively, an exhauster can be provided in the port section to create a vacuum atmosphere (e.g., column 12, lines 6-11, Figure 12).” Applicants note, however, that regarding an atmospheric pressure in the interface section 12, column 9, lines 55-58, of the Ueda et al. patent merely describes that “the inside of the aligner 200 is under positive pressure by the clean gas supplied from the outside. On the other hand, the inside of the interface section 12 is naturally exhausted to be under normal pressure.” Accordingly, Applicants submit that the Ueda et al. patent does not teach or suggest creating a vacuum atmosphere in the interface section 12 (corresponding to the port section of the present invention recited in independent claim 48). Thus, Applicants submit that the Ueda et al. patent fails to teach or suggest the salient features of Applicants’ present invention as recited in independent claim 48, especially, the features of a port section through which a wafer is transferred between a chamber and another apparatus, the port section having a load-lock mechanism including a vacuum mechanism for creating a vacuum inside of the port section and a supply mechanism for supplying an inert gas into the inside of the port section. Accordingly, Applicants submit that the Ueda et al. patent does not teach or suggest the salient features of Applicants’ present invention, as recited in independent claim 48.

For the foregoing reasons, Applicants submit that the present invention, as recited in independent claim 48, is patentably defined over the cited art.

Dependent claims 49-62 also should be deemed allowable, in their own right, for defining other patentable features of the present invention in addition to those recited in independent claim 48. Further individual consideration of these dependent claims is requested.

Applicants further submit that the instant application is in condition for allowance. Favorable reconsideration, withdrawal of the rejection set forth in the above-noted Office Action and an early Notice of Allowance are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should be directed to our address listed below.

Respectfully submitted,



Attorney for Applicants
Steven E. Warner
Registration No. 33,326

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200
SEW/eab

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